Environmental Resources, LLC
P.O. Box 5305, Bozeman, Montana 59717 Phone (406) 582-8491 email: ruwaller@gmail.com

January 6, 2020

Mr. Paul Tweeten
Valley County Commissioner
501 Court Square, Box 1
Glasgow, Montana 59230

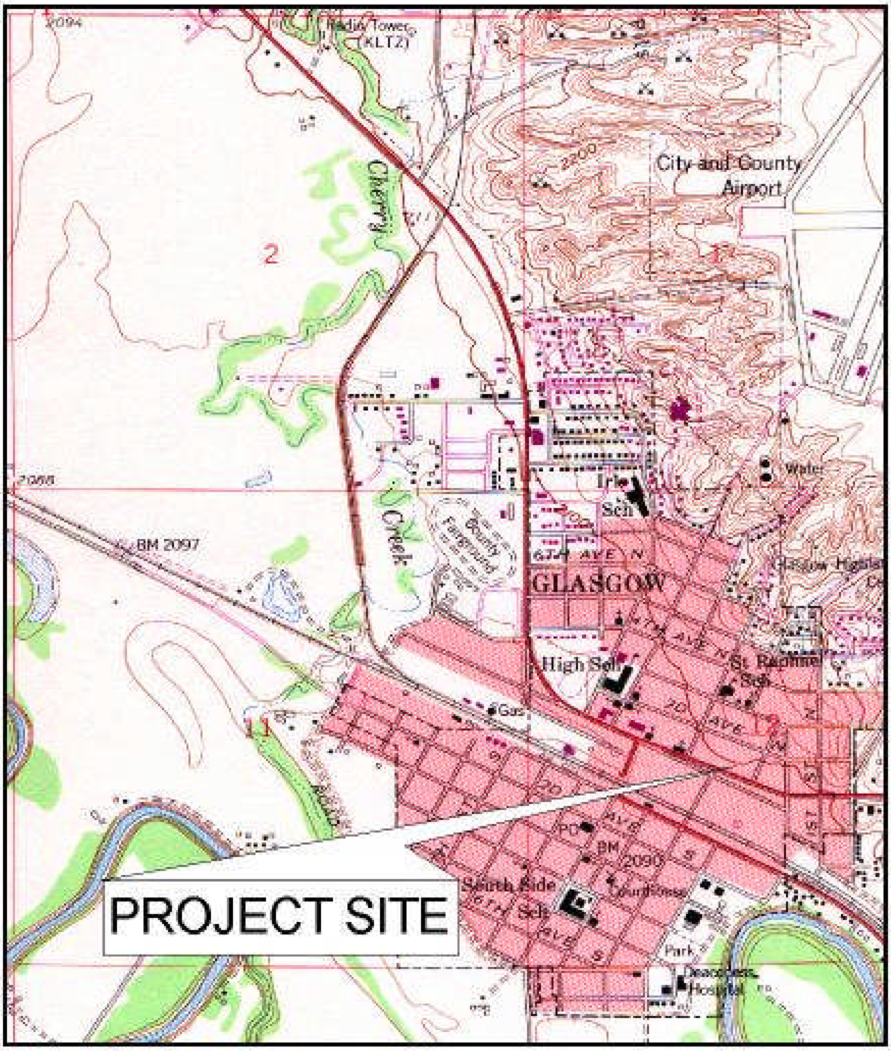
Subject: Corrective Action Work Plan
Mike's Muffler, Glasgow, Montana
DEQ Facility ID No. 53-13598
DEQ Release No. 4333, Work Plan ID 33983

Dear Mr. Tweeten:

Environmental Resources, LLC is pleased to submit this document to outline activities associated with additional operation and monitoring of a remediation system intended to mitigate subsurface petroleum contamination at the above referenced petroleum release site.

Site Location
The Mike's Muffler petroleum release site is located within the city limits of Glasgow, Montana at 320 1st Avenue North as shown in Figure 1. The site is situated in the northeast quarter of the southwest quarter of Section 12, Township 28 North, Range 39 East, Montana Principal Meridian.

Site Geology
Site geology is characterized by fine-grained fluvial sediments associated with the Milk River which is situated approximately 2000 feet southeast of the project site. Highly plastic, dense silty clay and sandy clay is interbedded with fine- to coarse-grained sand and gravel intervals. Local bedrock consists of the Cretaceous Bearpaw Shale and depth to bedrock is not precisely known. Groundwater is encountered at approximately 12-14 feet below ground surface. Shallow groundwater resources that were encountered during this investigation are not considered to be potable and are not utilized for human consumption.



SCALE: 1" = 2000'

ENVIRONMENTAL RESOURCES, LLC
Consulting Geologists and Environmental Scientists

MIKE'S MUFFLER
GLASGOW, MONTANA
SITE INVESTIGATION
FIGURE 1, REGIONAL SITE LOCATION MAP

Scope of Work

Proposed tasks to be performed within the scope of this work plan include the following:

1) Continue to operate the remediation system focusing air injection in the areas near monitoring wells MW-3 and MW-11.
2) Monitor and sample all site monitoring wells during March 2020 and September 2020.
3) Analyze all groundwater samples in accordance with Montana Tier 1 Risk-Based Corrective Action Guidance for Petroleum Releases. Also analyze samples for Intrinsic Biodegradation Indicators (IBIs).
4) Validate all laboratory data.
5) Prepare a Release Closure Plan (RCP).
6) Prepare a Standardized Generic Applications Report (AR-07).

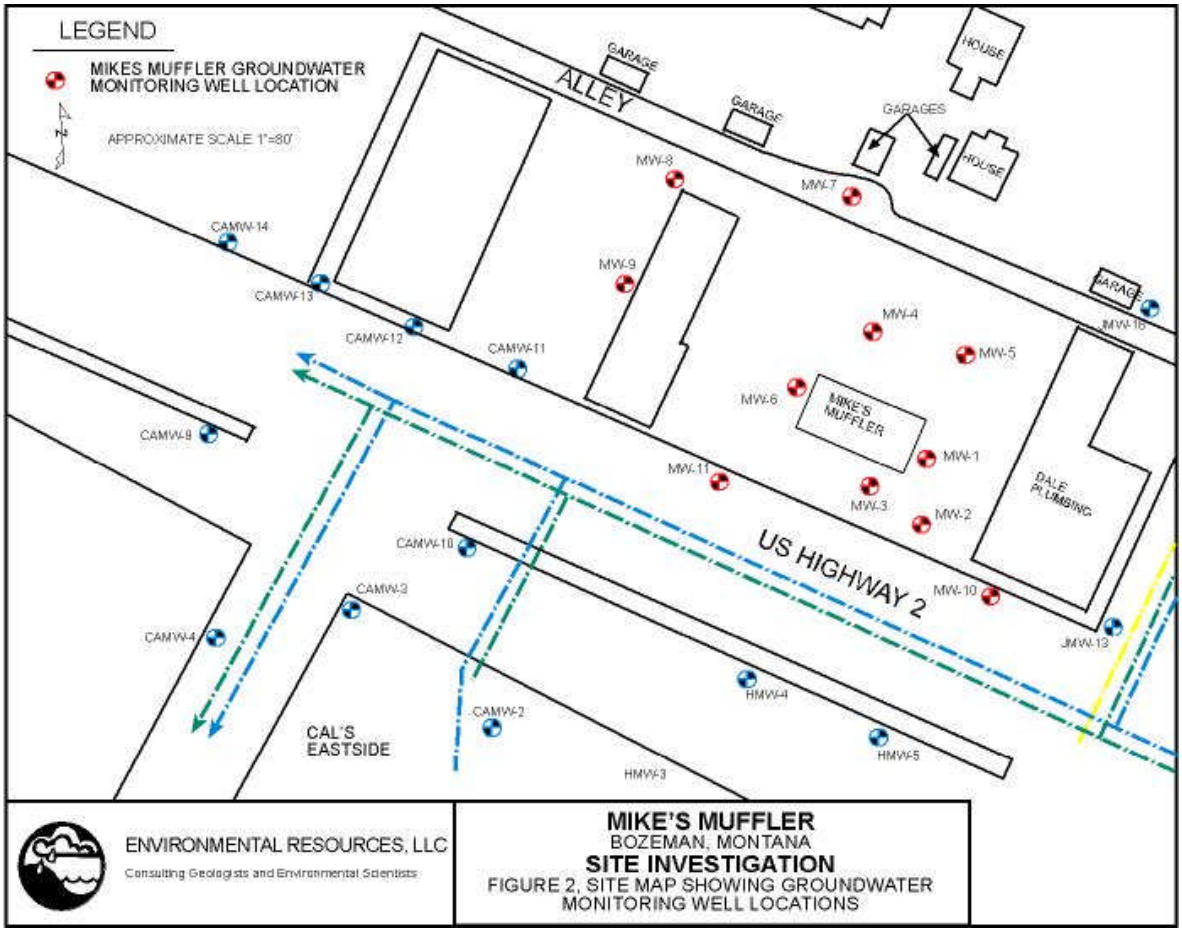
System Monitoring

The SVE/AS system will be operated to concentrate air injection into the subsurface near the vicinities of monitoring wells MW-3 and MW-11. Negative pressure will be measured using a set of magnehelic gauges, air flow rates will be measured using a handheld air velocity meter and volatile petroleum hydrocarbon production will be measured using a PID. Data collection will occur at startup, at one hour intervals for eight hours and at 24 hours following startup. Additional data will be collected from the remediation system and surrounding monitoring wells semi-annually during the period of operation.

Groundwater Sample Collection and Analysis

Groundwater monitoring will occur at system startup in March 2020 and during September 2020 with groundwater sample collection from monitoring wells MW-1, MW-2, MW-3, MW-5, MW-10 and MW-11 as shown on Figure 2. All of the well covers will be opened and the locking caps removed at least 30 minutes prior to obtaining static water level measurements. Static water levels will be measured from a reference point on top of the north side of each well casing using a Keck ET-89 electronic water level indicator. The water level indicator will be decontaminated prior to each measurement by scrubbing the indicator tip in an *Alconox®* wash solution, rinsing with a 10% methanol solution and triple rinsing with distilled water.

Following measurement of the static water levels, sample collection will commence by purging each well using a low flow sampling pump. Indicator parameters ORP, pH, specific conductance, temperature and dissolved oxygen will be measured during sample purging. Samples will be collected when the measured indicator parameters stabilize. Each sample will be decanted into the appropriate laboratory provided sample containers, preserved and placed on ice while awaiting delivery to the analytical laboratory. All of the groundwater samples will be analyzed for Volatile Petroleum Hydrocarbons (VPH) at an approved analytical laboratory.


LEGEND
MIKES MUFFLER GROUNDWATER MONITORING WELL LOCATION
APPROXIMATE SCALE 1"=80'
ALLEY
GARAGE
GARAGE
GARAGES
HOUSE
HOUSE
GARAGE
MW-8
MW-7
MW-9
MW-4
MW-5
MW-6
MW-1
MW-11
MW-3
MW-2
MW-10
MW-13
CAMW-14
CAMW-13
CAMW-12
CAMW-11
CAMW-9
CAMW-10
CAMW-3
CAMW-4
CAMW-2
HMW-4
HMW-5
HMW-3
MIKE'S MUFFLER
DALE PLUMBING
US HIGHWAY 2
CAL'S EASTSIDE
ENVIRONMENTAL RESOURCES, LLC
Consulting Geologists and Environmental Scientists
MIKE'S MUFFLER
BOZEMAN, MONTANA
SITE INVESTIGATION
FIGURE 2, SITE MAP SHOWING GROUNDWATER MONITORING WELL LOCATIONS

Reporting
A Standardized Generic Application Report (Report_AR-07) will be prepared that will be prepared that will summarize the results of system operation and monitoring. A Release Closure Plan (RCP) will be prepared and appended to the report. Data validation forms will also be appended to the AR-07 report.

Investigative Methods
Methods practiced during this investigation will follow generally accepted practices of similar consulting firms in the same geographical area. Quality Assurance/ Quality Control methods will be employed throughout all phases of this investigation to ensure meaningful and reproducible results and data.

Health and Safety
Health and safety issues will be addressed throughout this investigation to prevent exposure of site workers and other onsite personnel to potentially hazardous situations and chemical compounds. Several physical hazards will inherently be present throughout the field investigation while heavy equipment is being utilized for soil borings and monitoring well installation. Site specific health and safety precautions and information will be contained in a Health and Safety Plan which will remain onsite during all field activities.

Investigation Derived Waste
Drill cuttings, excess sample materials, drilling fluids, and water removed from a well during installation, development, and aquifer testing and all other investigation derived wastes will be disposed of according to all applicable local, state and federal laws and regulations governing the disposition of investigation derived wastes. Investigation derived wastes may consist of the following materials:

-- Drill cuttings
-- Purge water from monitor well sampling
-- Used soil and groundwater sampling materials
-- Excess sample material (soil and water)

Project Costs

Groundwater monitoring costs are summarized on the attached Unit Cost Worksheet. Costs associated with operation of the SVE/AS system are summarized below.

TASK	UNIT COST	COST
Task 1-Remediation System Startup and Monitoring		
Project management	4.0 hrs @ $134/hr	$536.00
Prepare AC-07 CAP	7.0 hrs @ $134/hr	938.00
Mobilization, RT from Bozeman	13 hrs @ $118.50/hr	1540.50
Mileage, 4WD	720 miles @ $0.63/mile	453.60
System startup/monitoring	10.0 hrs @ $118.50/hr	1185.00
Per Diem	3 days @ $30.50/day	91.50
Lodging	2 nights @ $120/night	240.00
PID rental	1 day @ $90/day	90.00
Dissolved oxygen meter rental	1 day @ $96/day	96.00
Magnehelic gauge rental	1 day @ $48/day	48.00
Air velocity meter rental	1 day @ $48/day	48.00
	Subtotal	**$5306.60**
Additional monitoring will be performed concurrently with a semi-annual groundwater monitoring event:		
Project management	1.0 hr @ $134/hr	$134.00
System monitoring, Scientist I	4.0 hrs @ $118.50/hr	474.00
PID rental	1 day @ $90/day	90.00
Dissolved oxygen meter rental	1 day @ $96/day	96.00
Magnehelic gauge rental	1 day @ $48/day	48.00
Air velocity meter rental	1 day @ $48/day	48.00
	Subtotal	**$890.00**
Task 2-Reporting		
Standardized Generic Applications Report (AR-07)	32.0 hrs @ $134/hr	$4288.00
Release Closure Plan	8.0 hrs @ $134/hr	$1072.00
	Subtotal	**$5360.00**
TOTAL ESTIMATED COST		**$11,556.60**

Limitations

This work was performed in accordance with generally accepted practices of other consulting firms conducting similar studies. Environmental Resources, LLC observed that degree of care and skill generally exercised by other consultants under similar conditions. Our findings and conclusions must not be considered as scientific certainties, but as opinions based upon our professional judgment based upon the data gathered during the course of this investigation. Other than this, no warranty is implied or intended.

Submitted by
Environmental Resources, LLC

Robert H. Waller
Project Geologist

cc: DEQ-PTCS
MPTRCB

GROUNDWATER MONITORING AND SAMPLING
UNIT COST WORKSHEET

Montana Department of Environmental Quality
Petroleum Release Section/Petroleum Fund Services Section

Contractor Information

Company Name: Environmental Resources, LLC
Address: P.O. Box 5305
City, State, Zip: Bozeman, MT 59717
Phone:406.582.8491
Cost Estimator: Bob Waller

Project Information

Site Name: Mike's Muffler Facility ID # 53-13598
Address: 320 First Avenue North Release # 4333
City: Glasgow

Environmental Resources, LLC

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Monitoring Well Details

Total Number of Wells at Site____11_____
Number of Wells to be monitored __ ____
Number of Wells to be monitored/sampled _6__
Well Casing Diameter (inches) ___2”____
Average Depth to Groundwater (ft) 13’
Average Depth of Wells (ft)___25’

Monitoring/Sampling Interval

Estimated Start Date:_3/20
Quarterly (# of events_____)
x Semi-annual (# of events____2_____)
Annual (# of events_____)
Other (please specify) _____

Well Purging Method

Hand bailing
Peristalic Pump
x Submersible Pump
ρ Micropurge
ρ No Purge
ρ Other (please specify) _____

Other Services

ρ Free Product Recovery
ρ Groundwater Well Survey
ρ Wellhead retrofit/reconstruction
ρ Other (please specify) _____

Task	Unit Cost	Number of Units	Total Cost
Project Management	$134/hr	2	$268.00
Mobilization/Demobilization[1]			
Mobilization/Demobilization	$2.69/mile	720	$1936.80
Field Work			
Water Level Measurements [2] (unsampled wells only)	$47/well		$
Well Monitoring/Purging/Sampling[3]	$186.00well	12	$2232.00
Other Service (please specify) _____			$
Other Service (please specify) _____			$
Report Preparation[4]			
Quarterly/Semi-annual AR-01 report	$1430/report		$
Annual MR-01 report	$1760/report		$
Other (please specify) _____	$/report		$
		Subtotal Project Expense	$4436.80

The costs below are estimates, not bids. Lodging and laboratory analysis will be paid at actual cost when documented by receipts/invoices.

Per Diem(specify number of individuals__1___)			
Per Diem: Motel	$120/person per day	1	$120.00
Per Diem: Food	$30.50/person per day	3	$91.50
Laboratory Analysis[5]			
Volatile Petroleum Hydrocarbons (VPH)	$135/sample	12	$1620.00
Extractable Petroleum Hydrocarbons (EPH) EPH "screen"	$70/sample		$
EPH "fractions"	/sample		$
BTEX/MTBE/Naphthalene only-method:	/sample		$
Polyaromatic Hydrocarbons (PAHs)	/sample		$
PTRCB sampling fee[6]	**$10**/*sample*		$
Other (please specify) shipping	$20/sample	12	$240.00
Other (please specify) _____	/sample		$
		TOTAL PROJECT EXPENSE	$6508.30
		Estimated Project Expense per event (total project cost / # of events)	$